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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.  | CONFIRMATION NO. |
|--|-------------|----------------------|----------------------|------------------|
| 10/597,233   | 07/17/2006  | Keiichiro Oishi      | MIK10002             | 8092             |
| 24203  | 7590        | 02/23/2010           | EXAMINER             |                  |
| GRIFFIN & SZIPL, PC<br>SUITE PH-1<br>2300 NINTH STREET, SOUTH<br>ARLINGTON, VA 22204 |             |                      | POLYANSKY, ALEXANDER |                  |
|  |             |                      | ART UNIT             | PAPER NUMBER     |
|  |             |                      | 1793                 |                  |
|  |             |                      | MAIL DATE            | DELIVERY MODE    |
|  |             |                      | 02/23/2010           | PAPER            |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |  |   |  |
|------------------------------|--|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/597,233   | <b>Applicant(s)</b><br>OISHI, KEIICHIRO |  |
|                              | <b>Examiner</b><br>ALEXANDER POLYANSKY | <b>Art Unit</b><br>1793                 |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 October 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 and 19-110 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 22-32, 63-66, 81-84, 90-92, 98, 102, 106 and 110 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Continuation of Disposition of Claims: Claims withdrawn from consideration are 7-17,19-21,33-62,67-80,85-89,93-97,99-101,103-105 and 107-109.

Art Unit: 1793

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of group I, claim(s) 1-6, 22-32, 63-66, 81-84, 90-92, 98, 102, 106 and 110 in the reply filed on October 19, 2009 is acknowledged.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-4, 29-32, 64, 66, 82-83, 91-92, 98, 102, 106 and 110 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

#### **In claims 3-4,**

a). the claimed symbol "X2" is not further identified in the claim. Its not necessary.

b). the claimed formulas require all of the elements as recited in the Markush group, so does the claim require every element and not just **one** selected from the Markush group?

### ***Claim Interpretation***

In view of the 35 USC 112 rejection above, the formulas of claims 3-4 will be interpreted to contain only the elements chosen from the Markush group versus all the elements as recited in claims 3-4.

Art Unit: 1793

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-2, 5-6, 22-28, 63, 65, 81, 84, and 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oishi et al. JP 10-152735 (IDS, machine translation attached).**

**Regarding claims 1-2,** Oishi teach a copper alloy material in wire form (title, abstract, and claims 1-5) comprising the following composition:

| <b>Element</b> | <b>Recited mass%</b> | <b>Oishi et al.</b> | <b>Overlap</b> |
|----------------|----------------------|---------------------|----------------|
| Cu             | 62-91                | 62-69               | 62-69          |
| Sn             | 0.01-4.00            | 0.2-1.0             | 0.2-1.0        |
| Sb             | 0.02-0.25            | 0.02-0.15           | 0.02-0.15      |
| Ni             | 0.005-0.500          | 0.1-1.0             | 0.1-0.5        |
| P              | 0.01-0.25            | 0.02-0.15           | 0.02-0.15      |
| Zn             | balance              | balance             | balance        |

In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a *prima facie* case of obviousness exists. See MPEP 2144.05(I). It would have been obvious to one skilled in the art to have selected the claimed range from the disclosed range of Oishi because Oishi has disclosed the same utility in the whole disclosed range.

Art Unit: 1793

With regard to the claimed formulas in claims 1-2, since Oishi teaches an overlapping composition of all the elements required in the formulas claimed, the claimed formulas are obvious in view of Oishi's teaching. The examiner's position is further supported by in re Cooper and Foley, which states that it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art. In re Cooper and Foley 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, Saklatwalla v. Marburg, 620 O.G. 685, 1949 C.D. 77.

In claims 1-2, with regard to the claimed total area ratio of  $\alpha$ ,  $\gamma$ , and  $\delta$  phases is 95 to 100%, Oishi does not specify the phases or total area ratio; however, since Oishi teaches an overlapping composition and a substantially similar method of preparation by melt-solidification, rolling, casting as shown in instant specification pars. 17, 21, 30, etc., the phases and total area ratios as claimed would be expected in the alloy of Oishi. See MPEP 2112.01.

Furthermore, it is the examiner's position that the preamble of claim 1, "for forming a netted structure used in seawater", merely states the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, therefore the preamble is not considered a limitation and is of no significance to claim construction. See MPEP 2111.02(II).

**Regarding claims 5 and 27**, with regard to the claimed total area ratio of  $\gamma$  and  $\delta$  phases is 10% or less, Oishi does not specify the phases or total area ratio; however, since Oishi teaches an overlapping composition and a substantially similar method of preparation by casting, the phases and total area ratios as claimed would be expected in the alloy of Oishi. See MPEP 2112.01.

Art Unit: 1793

**Regarding claims 6 and 28**, Oishi teaches an overlapping composition of Cu and Sn as required in the formula claimed, the claimed formulas are obvious in view of Oishi's teaching. The examiner's position is further supported by *in re Cooper and Foley*, which states that it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art. *In re Cooper and Foley* 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, *Saklatwalla v. Marburg*, 620 O.G. 685, 1949 C.D. 77.

**Regarding claims 22, 24, 81, and 84**, Oishi teaches the copper alloy material is a fish cultivation net (pars. 2-3), which meets the net or grid limitation.

**Regarding claim 23**, Oishi teaches the copper alloy material is a waved wire having curved portions, and the netted structure has a rhombically netted form made by arranging a large number of the waved wires in parallel such that the adjacent waved wires are entwined with each other at the curved portions (ref# 3a, fig. 1, par. 33).

**Regarding claim 25**, Oishi teaches the fish cultivation net includes a reinforcing frame attached along the lower edge of the net in a ring-shaped manner, and the reinforcing frame maintains the shape of the lower edge of the net and applies a downward tension to the net (ref# 2, fig. 1, par. 32).

**Regarding claim 26**, Oishi teaches the reinforcing frame is formed of a pipe made of the same copper alloy as the material forming the net (par. 32, fig. 1).

**Regarding claims 63 and 65**, Oishi teaches the copper alloy material is a wire. Oishi teaches the wire alloy is cast (par. 45 and etc.).

Even though Oishi does not specify "plastic-processed" or "plastic processing," since the "plastic-processed" and "plastic processing" are processing limitations in product claims, they

Art Unit: 1793

are not expected to impart distinctive structural characteristics to the copper alloy cultivation net as claimed over Oishi, the product-by-process steps of claims 63-66 do not lend to the determination of patentability of the copper alloy net, unless proven otherwise. See MPEP 2113.

**Regarding claim 90**, Oishi teaches the copper alloy material is a fish cultivation net (pars. 2-3), which meets the net or grid limitation.

**Claims 3-4, 29-32, 64, 66, 82-83, 91-92, 98, 102, 106, and 110 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oishi as applied to claim 1 above and further in view of Furukawa Electric JP 49040226A (abstract only).**

**Regarding claims 3-4**, Oishi teaches the composition, total area ratio, and formulas as required by claims 1-3 as stated above.

Oishi does not teach the weight% of Si as recited in claims 3-4.

However, Furukawa teaches a copper alloy (abstract), wherein Furukawa added <1% Si (title and abstract). At the time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate less than 1% Si in Oishi's steel to increase the corrosion resistance of the copper alloy as disclosed by Furukawa (title and abstract).

In claims 3-4, with regard to the claimed total area ratio of  $\alpha$ ,  $\gamma$ , and  $\delta$  phases is 95 to 100%, the examiner's position is as stated in the rejection of claims 1 and 2 above.

In claims 3-4, with regard to the claimed formulas, the examiner's position is as stated in the rejection of claims 1 and 2 above.

**Regarding claims 29 and 31**, with regard to the claimed total area ratio of  $\gamma$  and  $\delta$  phases is 10% or less, Oishi does not specify the phases or total area ratio; however, since Oishi teaches an overlapping composition and a substantially similar method of preparation by casting, the



Art Unit: 1793

phases and total area ratios as claimed would be expected in the alloy of Oishi. See MPEP 2112.01.

**Regarding claims 30 and 32**, Oishi teaches an overlapping composition of Cu and Sn as required in the formula claimed, the claimed formulas are obvious in view of Oishi's teaching. The examiner's position is further supported by *in re Cooper and Foley*, which states that it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art. *In re Cooper and Foley* 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, *Saklatwalla v. Marburg*, 620 O.G. 685, 1949 C.D. 77.

**Regarding claims 64 and 66**, Oishi teaches the copper alloy material is a wire. Oishi teaches the wire is alloy is cast (par. 45 and etc.).

Even though Oishi does not specify "plastic-processed" or "plastic processing," since the "plastic-processed" and "plastic processing" are processing limitations in product claims, they are not expected to impart distinctive structural characteristics to the copper alloy cultivation net as claimed over Oishi, the product-by-process steps of claims 63-66 do not lend to the determination of patentability of the copper alloy net, unless proven otherwise. See MPEP 2113.

**Regarding claims 82-83, 91-92, and 102**, Oishi teaches the copper alloy material is a fish cultivation net (pars. 2-3), which meets the net or grid limitation.

**Regarding claim 98**, Oishi teaches the copper alloy material is a waved wire having curved portions, and the netted structure has a rhombically netted form made by arranging a large number of the waved wires in parallel such that the adjacent waved wires are entwined with each other at the curved portions (ref# 3a, fig. 1, par. 33).

Art Unit: 1793

**Regarding claim 106**, Oishi teaches the fish cultivation net includes a reinforcing frame attached along the lower edge of the net in a ring-shaped manner, and the reinforcing frame maintains the shape of the lower edge of the net and applies a downward tension to the net (ref# 2, fig. 1, par. 32).

**Regarding claim 110**, Oishi teaches the reinforcing frame is formed of a pipe made of the same copper alloy as the material forming the net (par. 32, fig. 1).

### ***Response to Arguments***

Applicant's arguments filed October 19, 2009 have been fully considered but they are not persuasive.

Any and all arguments regarding Parikh patent are moot, because Parikh was not used in the rejection of elected claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDER POLYANSKY whose telephone number is (571)270-5904. The examiner can normally be reached on Monday-Friday, 8:00 a.m. EST - 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alexander Polyansky/  
Examiner, Art Unit 1793

/Roy King/  
Supervisory Patent Examiner, Art Unit  
1793